

1 Q. Reference: (<http://www.powerinourhands.ca/pdf/MHI.pdf>) *Manitoba Hydro*
2 *International: Review of the Muskrat Falls and Labrador Island HVdc Link and the*
3 *Isolated Island Options*, October 2012, page 44.
4 “MHI reviewed Nalcor’s design specification documents which outlined in detail the
5 approach determining the tower design and geometry, span spacing, load capacity,
6 and other detailed engineering criteria pertinent to the proposed HVdc transmission
7 system.”

8 Does the design for the Labrador-Island HVdc Link include consideration of ice
9 accumulation on the transmission tower structures? If so, please describe in detail
10 these design considerations. If not, provide the explanation for not including this
11 consideration in the design.

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14 A. Standard tower design procedures assume that the radial ice load is applied
15 completely around all tower members. Tower dead loads and wind face surface
16 area are calculated based on this assumption. This is conservative, given that in
17 reality ice forms on one side. For the rime ice zones, given that rime ice tends to
18 build up in the tower body even when it sheds off the conductor, it was assumed
19 that the tower would be completely encased in rime ice.